USGS

WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2005MA52B

Title: Sources of E. coli during Wet-Weather Events

Project Type: Research

Focus Categories: Sediments, Non Point Pollution, Models

Keywords: E. coli, pathogens, source water protection

Start Date: 03/01/2005

End Date: 02/28/2006

Federal Funds Requested: $25,000

Non-Federal Matching Funds Requested: $35,163

Congressional Districts: MA 2 & 3

Principal Investigator:
Sarah Dorner

Abstract

Recent waterborne disease outbreaks in North America point to the need for watershed-based source water protection. However, information regarding the sources, survival and pathways of pathogens is not readily available for water managers.

This investigation aims to monitor the fate and transport of E. coli at a watershed-scale in the Blackstone River watershed in Massachusetts.

The proposed research will provide a greater mechanistic understanding of the fate and transport of E. coli, a primary microbial indicator of water quality. The expected results of this investigation include a better understanding of the environmental factors leading to higher numbers of pathogenic microorganisms in rivers and streams, as well as more detailed information on potential sources of pathogens within a complex watershed. This study will provide water managers and regulators with reliable information to help them develop strategies for source water protection for drinking water and for other important uses of the watershed such as recreation.